Current In-use Pesticides in Streams Located in Agricultural, Urban and Relatively Undisturbed Areas of the Lower Fraser Valley

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In Fall 2003, 14 waterways were sampled in the Lower Fraser Valley for in-use pesticides, with the objective of identifying and quantifying concentrations of these pesticides in surface waters of the valley. Twenty-litre water samples from each site were processed for analysis; data for over 70 pesticides and/or their transformation products are discussed here. There were several pesticide detections in each sample, at picogram to nanogram per litre levels, including samples collected from reference or relatively undisturbed sites. However, these reference samples resulted in fewer detections and showed the lowest concentrations for most pesticides. Pesticides detected at the highest levels (up to 81.2 nanograms per litre for simazine) were: diazinon, atrazine, linuron, metolachlor, methoprene and simazine. Pesticide detections and concentrations varied among sites within each land use category (agricultural, urban, both agriculture and urban, and reference). There were more detections and higher concentrations at sites with agricultural influence.